EXPLANATION

- Gulfco Marine Maintenance Site Boundary (approximate)
- Monitoring Well Location - Zone A
- Temporary Piezometer - Zone A
- (1.22) Vinyl Chloride Concentration (mg/L)
- —0.2— Concentration Contour (mg/L) Variable Contour Interval

Notes:
1. Concentrations are for the most recent sample collected from each location.
2. NA = Not analyzed for this compound.
3. J = Estimated value.

Source of photo: H-GAC, Texas aerial photograph, 2006.

GULFCO MARINE MAINTENANCE
FREEPORT, BRAZORIA COUNTY, TEXAS

Figure 60

VINYL CHLORIDE CONCENTRATIONS IN ZONE A MONITORING WELLS

PROJECT: 1352	BY: ZGK	REVISIONS
DATE: APRIL, 2011	CHECKED: EFP	

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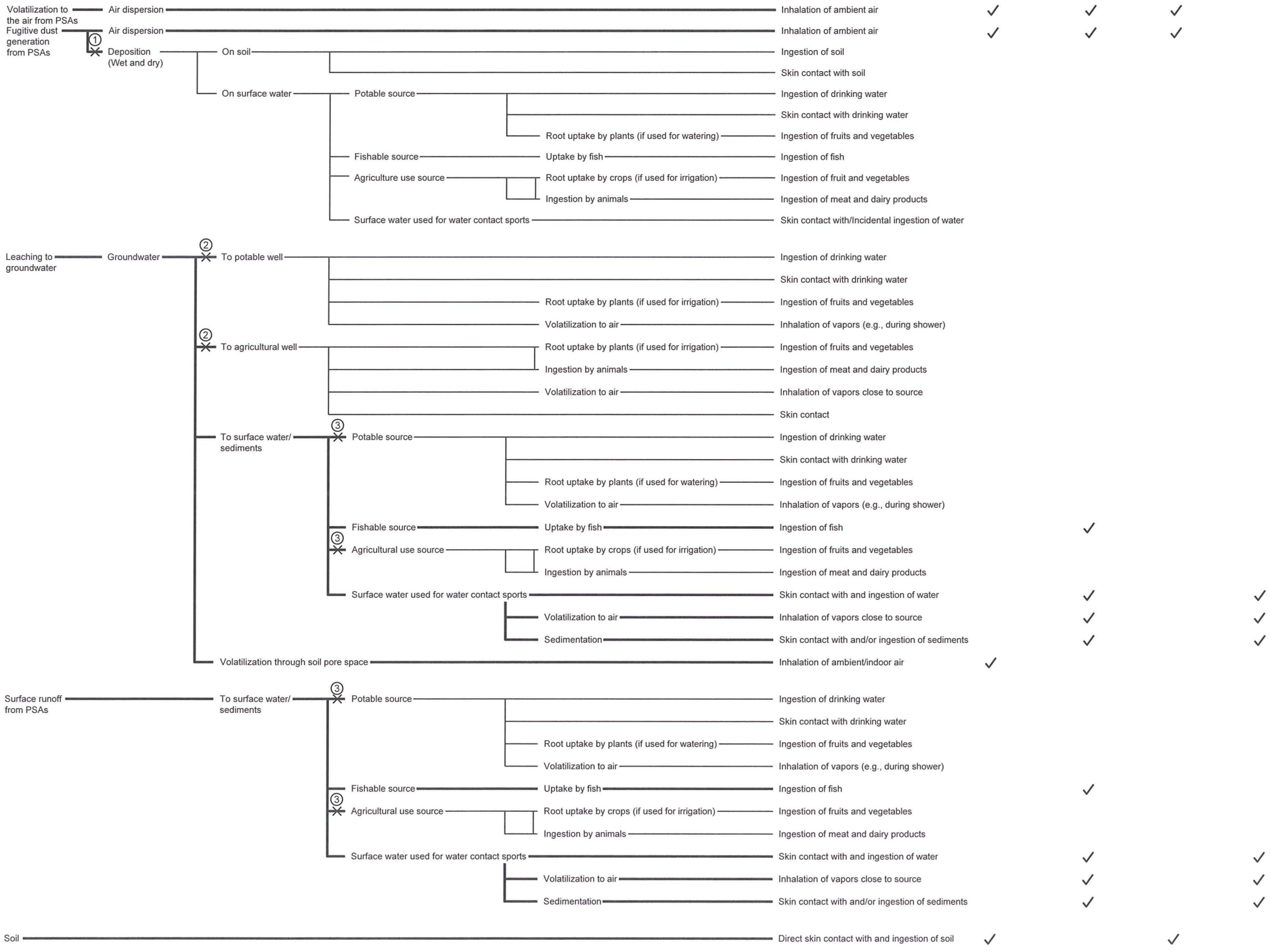

LEGEND:

- Pathway is Incomplete
- Pathway is Complete, Significance evaluated in Baseline Human Health Risk Assessment (BHHRA)

NOTES:

1. Based on surface soil samples collected on Lots 19 and 20, it does not appear that significant entrainment and subsequent deposition of particulates has occurred at the Site or at off-site locations.
2. No water supply or agricultural wells are in use in the Site vicinity and groundwater in the uppermost water-bearing units is not usable due to high total dissolved solids concentrations. The incompleteness of this pathway is contingent on the continued stability of the groundwater contaminant plume within the uppermost, non-potable water-bearing units at the Site.
3. Surface water is not a potable or agricultural source due to high salinity.

✓ Indicates potential receptor for complete migration pathway.

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Figure 61

HUMAN HEALTH CONCEPTUAL SITE MODEL SOUTH AREA

PROJECT: 1352	BY: ZGK	REVISIONS:
DATE: APRIL, 2011	CHECKED: KHT	

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RELEASE MECHANISM	ENVIRONMENTAL TRANSPORT AND FATE			EXPOSURE ROUTE	POTENTIAL FUTURE ON-SITE CONSTRUCTION OR INDUSTRIAL WORKER RECEPTOR	POTENTIAL RESIDENTIAL OFF-SITE RECEPTOR	POTENTIAL YOUTH TRESPASSER	POTENTIAL CONTACT RECREATION
Volatilization to the air from PSAs	Air dispersion			Inhalation of ambient air	✓	✓	✓	
Fugitive dust generation (1)	Air dispersion			Inhalation of ambient air	✓	✓	✓	
	Deposition (Wet and dry)	On soil		Ingestion of soil				
				Skin contact with soil				
		On surface water	Potable source	Ingestion of drinking water				
				Skin contact with drinking water				
				Root uptake by plants (if used for watering) — Ingestion of fruits and vegetables				
			Fishable source	Uptake by fish — Ingestion of fish				
			Agriculture use source	Root uptake by crops (if used for irrigation) — Ingestion of fruit and vegetables				
				Ingestion by animals — Ingestion of meat and dairy products				
			Surface water used for water contact sports	Skin contact with/Incidental ingestion of water				
Leaching to groundwater from PSAs	Groundwater migration (2)	To potable well		Ingestion of drinking water				
				Skin contact with drinking water				
				Root uptake by plants (if used for irrigation) — Ingestion of fruits and vegetables				
				Volatilization to air — Inhalation of vapors (e.g., during shower)				
		To agricultural well (2)		Root uptake by plants (if used for irrigation) — Ingestion of fruits and vegetables				
				Ingestion by animals — Ingestion of meat and dairy products				
				Volatilization to air — Inhalation of vapors close to source				
				Skin contact				
		To surface water/ sediments (3)	Potable source	Ingestion of drinking water				
				Skin contact with drinking water				
				Root uptake by plants (if used for watering) — Ingestion of fruits and vegetables				
				Volatilization to air — Inhalation of vapors (e.g., during shower)				
			Fishable source	Uptake by fish — Ingestion of fish				
			Agricultural use source	Root uptake by crops (if used for irrigation) — Ingestion of fruits and vegetables				
				Ingestion by animals — Ingestion of meat and dairy products				
			Surface water	Skin contact with and ingestion of water				
				Volatilization to air — Inhalation of vapors close to source				
				Sedimentation — Skin contact with and/or ingestion of sediments				
		Volatilization through soil pore space		Inhalation of ambient/indoor air	✓			
Surface runoff from PSAs	To surface water/ sediments (4)		Potable source	Ingestion of drinking water				
				Skin contact with drinking water				
				Root uptake by plants (if used for watering) — Ingestion of fruits and vegetables				
				Volatilization to air — Inhalation of vapors (e.g., during shower)				
			Agricultural use source (4)	Root uptake by crops (if used for irrigation) — Ingestion of fruits and vegetables				
				Ingestion by animals — Ingestion of meat and dairy products				
			Surface water in pond and wetlands area	Skin contact with and ingestion of water	✓	✓	✓	
				Volatilization to air — Inhalation of vapors close to source	✓	✓	✓	
				Sedimentation — Skin contact with and/or ingestion of sediments	✓	✓	✓	
Soil				Direct skin contact with and ingestion of soil	✓	✓		

LEGEND:

— ✕ — Pathway is Incomplete

——— Pathway is Complete, Significance evaluated in Baseline Human Health Risk Assessment (BHHRA)

NOTES:

(1) The high moisture content and vegetated nature of the limited surface soils in the North Area are not conducive to significant dust generation, dispersion and subsequent deposition.

(2) No water supply or agricultural wells are in use in the Site vicinity and groundwater in the uppermost water-bearing units is not usable due to high total dissolved solids concentrations. The determination of this pathway as incomplete is contingent on the continued stability of the groundwater contaminant plume within the uppermost, non-potable water-bearing units at the Site.

(3) Groundwater communication with North Area surface water features (e.g., ponds, wetlands) is not significant due to water table elevations below the shallow depths of these features and the low permeability of underlying clay soils.

(4) Nearby surface water is not used for agricultural use or drinking water.

✓ Indicates potential receptor for complete migration pathway.

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FREEPORT, BRAZORIA COUNTY, TEXAS

Figure 62

HUMAN HEALTH CONCEPTUAL SITE MODEL NORTH AREA

PROJECT: 1352	BY: ZGK	REVISIONS:
DATE: APRIL, 2011	CHECKED: KHT	

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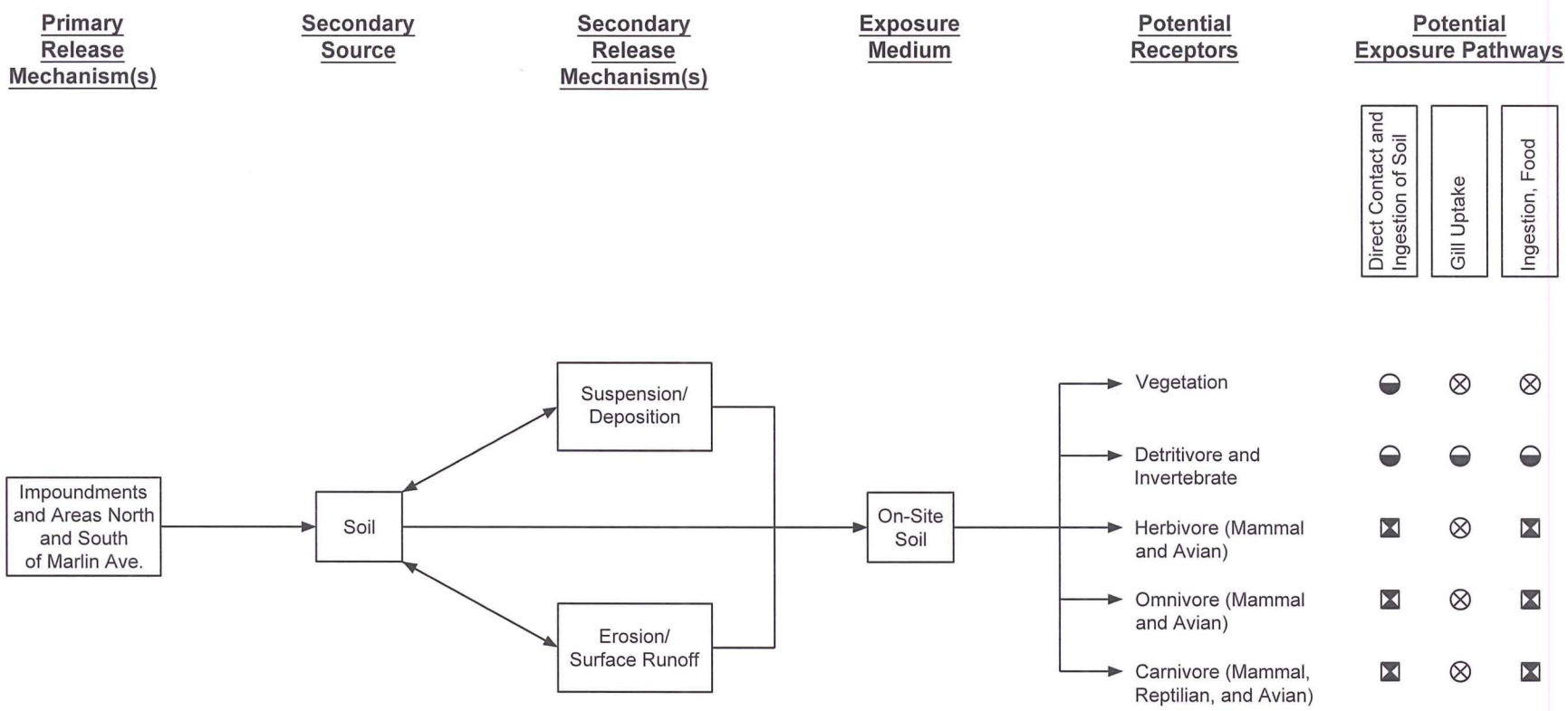

LEGEND

- ⊠ No acceptable risk (Final SLERA conclusion)
- ■ Pathway is potentially complete
- ⊠ Pathway is incomplete
- ⊗ Pathway is not viable
- ◒ For South Area soils, pathway is mitigated by lack of complete exposure pathways. For North Area soils, pathway is potentially complete.

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Figure 63

CONCEPTUAL SITE MODEL -TERRESTRIAL ECOSYSTEM

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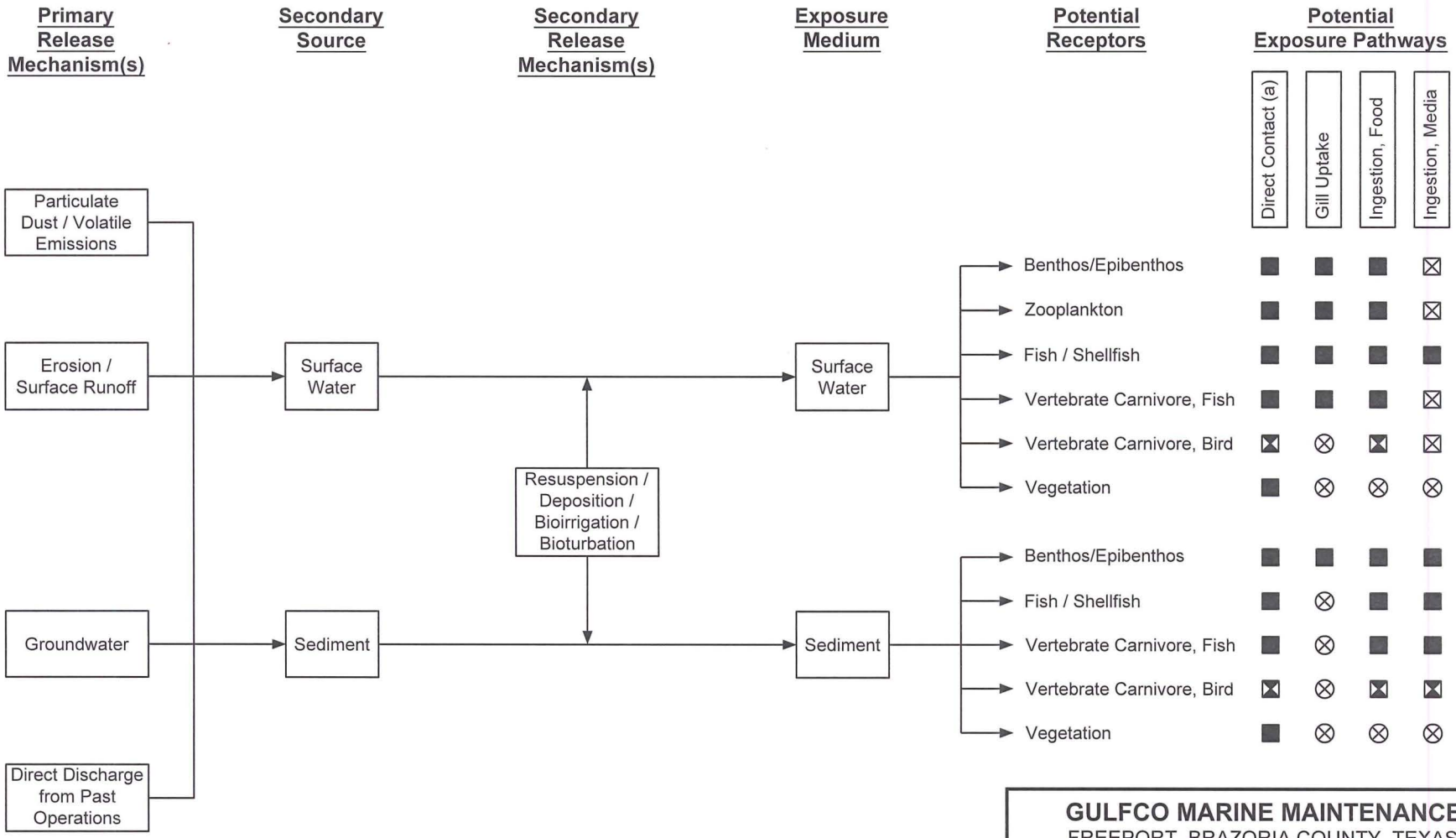

LEGEND

- ⊠ No acceptable risk (Final SLERA conclusion)
- ■ Pathway is potentially complete
- ⊠ Pathway is incomplete
- ⊗ Pathway is not viable
- (a) Direct contact includes dermal absorption

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FREEPORT, BRAZORIA COUNTY, TEXAS

Figure 64

CONCEPTUAL SITE MODEL -AQUATIC ECOSYSTEM

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